

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Seher et al.

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TITLE: PRESSURE VARIATION FLUID TRANSPORT, IN PARTICULAR
FOR BODY-FLUID ANALYSIS

Attorney Docket No.: US 20-00-3783

Assistant Commissioner For Patents
Washington, D.C. 20231

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July 23, 2001 (Date of Deposit)

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Name

Allison Berkman

Signature

PRELIMINARY AMENDMENT

Dear Sir:

Please amend the application as set forth below.

In The Specification

On page 1, between lines 3 and 4, insert -- 1. Field of the Invention --.

On page 1, between lines 5 and 6, insert -- 2. Discussion of the Background
Art --.

In The Abstract

Please replace the present abstract with the following:

A fluid movement system for moving a sample fluid is preferably included in a cartridge to be inserted into a reading device. The fluid movement system includes a pressure variation means for moving the sample fluid under the influence of a pressure variation applied to the fluid movement system, and a

timing means for controlling the timing for releasing a pressure in the pressure variation means.

In The Claims

Please amend the claims as follows:

1. (Amended) A fluid movement system for moving a sample fluid comprising:

pressure variation means for moving the sample fluid under the influence of a pressure variation applied to the fluid movement system, and

timing means for controlling the timing for releasing a pressure in the pressure variation means.

2. (Amended) The fluid movement system of claim 1, further comprising a sensing element for sensing the sample fluid, wherein the pressure variation means is arranged for moving the sample fluid from and/or to the sensing element.

3. (Amended) The fluid movement system of claim 1, further comprising fluid guiding means for guiding the sample fluid.

4. (Amended) The fluid movement system of claim 1, wherein the pressure variation means comprises volume-variation means for generating an overpressure and/or an underpressure by means of a volumetric variation.

5. (Amended) The fluid movement system of claim 4, wherein the pressure variation means further comprises at least one valve.

6. (Amended) The fluid movement system of claim 4, wherein the pressure variation means further comprises a resilient member for counter-acting against the volumetric variation applied to the volume-variation means.

7. (Amended) The fluid movement system of claim 1, wherein the pressure variation means comprises:

volume-variation means for successively generating an overpressure and/or an underpressure by means of a volumetric variation,

a first valve for releasing the overpressure and/or for at least temporarily maintaining the underpressure, and

a resilient member for counter-acting against the volumetric variation applied to the volume-variation means.

8. (Amended) The sample fluid movement system of claim 7, further comprising:

a second valve for securing the sample fluid against movement as long as the overpressure is maintained and/or for allowing the sample fluid to move as long as the underpressure is maintained.

9. (Amended) A method for moving a sample fluid comprising:

providing a pressure variation,

moving the sample fluid under the influence of the provided pressure variation, and

controlling the timing for releasing a pressure in the pressure variation means.

10. (Amended) A method for sensing a sample fluid, comprising:

providing the sample fluid into a cartridge,

inserting the cartridge into a reading device,

providing a pressure variation in the cartridge,

moving the sample fluid to a sensing element by using the provided pressure variation,

controlling the timing for releasing a pressure in the pressure variation means, and

sensing the moved the sample fluid by means of the sensing element.

11. (Amended) A software program, adapted to be provided by any kind of data carrier, for executing the steps of a method for moving a sample fluid when run in or by any suitable data processing unit, said method comprising:

providing a pressure variation,

moving the sample fluid under the influence of the provided pressure variation, and

controlling the timing for releasing a pressure in the pressure variation means.

Please add the following new claims:

12. (Newly added) The fluid movement system of claim 1, wherein said fluid movement system is included in a cartridge to be inserted into a reading device.

13. (Newly added) The fluid movement system of claim 1, further comprising fluid guiding means for guiding the sample fluid by means of capillary forces.

14. (Newly added) The method of claim 9, wherein said sample fluid is included in a cartridge to be inserted into a reading device.

15. (Newly added) The software program of claim 11, wherein said software program is stored on a data carrier.

Remarks

Claims 1-11 remain in the application, and claims 12-15 have been newly added.

The specification has been amended to include headings consistent with US practice.

The Abstract of the Disclosure has been amended to eliminate reference numbers and to more clearly describe the invention.

Claims 1-11 have been amended to eliminate reference numbers and letters, the phrase "characterized by," and the term "preferably." As such, claims 1-11 have been clarified by amendment above for purposes of form. It is respectfully submitted that the amendments to claims 1-11 are neither narrowing nor made for substantial reasons related to patentability as defined by the Court of Appeals for the Federal Circuit (CAFC) in Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 95-1066 (Fed. Cir. 2000). Therefore, the amendments to claims 1-11 do not create prosecution history estoppel and, as such, the doctrine of equivalents is available for all of the elements of claims 1-11.

Claims 12-15 are newly added. Claim 12 recites features claimed as "preferable" in claim 1, claim 13 recites features claimed as "preferable" in claim 3, and claim 14 recites features claimed as "preferable" in claim 9. Claim 15 recites a feature claimed in the alternative in claim 11.

Consideration and allowance of the claims is respectfully requested.

Attached hereto is a marked up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made."

Date

7/23/01

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Specification

On page 1, between lines 3 and 4, insert -- 1. Field of the Invention --.

On page 1, between lines 5 and 6, insert -- 2. Discussion of the Background Art --.

In The Abstract

Please replace the present abstract with the following:

A fluid movement system for moving a sample fluid is preferably included in a cartridge to be inserted into a reading device. The fluid movement system includes a pressure variation means for moving the sample fluid under the influence of a pressure variation applied to the fluid movement system, and a timing means for controlling the timing for releasing a pressure in the pressure variation means.

In The Claims

Please amend the claims as follows:

1. (Amended) A fluid movement system [(10), preferably comprised in a cartridge (400) to be inserted into a reading device (420).] for moving a sample fluid[, characterized by] comprising:

pressure variation means [(40, 50, 100, 110)] for moving the sample fluid under the influence of a pressure variation applied to the fluid movement system [(10)], and

timing means for controlling the timing for releasing a pressure in the pressure variation means [(40, 50, 100, 110)].

2. (Amended) The fluid movement system [(10)] of claim 1, further comprising a sensing element [(140)] for sensing the sample fluid, wherein the

pressure variation means [(40, 50, 100, 110)] is arranged for moving the sample fluid from and/or to the sensing element [(140)].

3. (Amended) The fluid movement system [(10)] of claim 1, further comprising fluid guiding means [(120, 210, 220)] for guiding the sample fluid[, preferably by means of capillary forces].

4. (Amended) The fluid movement system [(10)] of claim 1, wherein the pressure variation means [(40, 50, 100, 110)] comprises volume-variation means [(40)] for generating an overpressure and/or an underpressure by means of a volumetric variation.

5. (Amended) The fluid movement system [(10)] of claim[s] 4, wherein the pressure variation means [(40, 50, 100, 110)] further comprises at least one valve [(100, 110)].

6. (Amended) The fluid movement system [(10)] of claim[s] 4, wherein the pressure variation means [(40, 50, 100, 110)] further comprises a resilient member [(50)] for counter-acting against the volumetric variation applied to the volume-variation means [(40)].

7. (Amended) The fluid movement system [(10)] of claim 1, wherein the pressure variation means [(40, 50, 100, 110)] comprises:

volume-variation means [(40)] for successively generating an overpressure and/or an underpressure by means of a volumetric variation,

a first valve [(100)] for releasing the overpressure and/or for at least temporarily maintaining the underpressure, and

a resilient member [(50)] for counter-acting against the volumetric variation applied to the volume-variation means [(40)].

8. (Amended) The sample fluid movement system [(10)] of claim 7, further comprising:

a second valve [(110)] for securing the sample fluid against movement as long as the overpressure is maintained and/or for allowing the sample fluid to move as long as the underpressure is maintained.

9. (Amended) A method for moving a sample fluid[, preferably comprised in a cartridge (400) to be inserted into a reading device (420).] comprising [the steps of]:

[(a)] providing a pressure variation,

[(b)] moving the sample fluid under the influence of the provided pressure variation, and

[(c)] controlling the timing for releasing a pressure in the pressure variation means [(40, 50, 100, 110)].

10. (Amended) A method for sensing a sample fluid, comprising [the steps of]:

[(a)] providing the sample fluid into a cartridge [(400)],

[(b)] inserting the cartridge [(400)] into a reading device [(420)],

[(c)] providing a pressure variation in the cartridge [(400)],

[(d)] moving the sample fluid to a sensing element [(140)] by using the provided pressure variation,

[(e)] controlling the timing for releasing a pressure in the pressure variation means [(40, 50, 100, 110)], and

[(f)] sensing the moved the sample fluid by means of the sensing element [(140)].

11. (Amended) A software program, adapted to be [stored on or otherwise] provided by any kind of data carrier, for executing the steps of [the] a method [of]

claim 9 or 10] for moving a sample fluid when run in or by any suitable data processing unit, said method comprising:

providing a pressure variation,

moving the sample fluid under the influence of the provided pressure variation,
and

controlling the timing for releasing a pressure in the pressure variation means.

Please add the following new claims:

12. (Newly added) The fluid movement system of claim 1, wherein said fluid movement system is included in a cartridge to be inserted into a reading device.

13. (Newly added) The fluid movement system of claim 1, further comprising fluid guiding means for guiding the sample fluid by means of capillary forces.

14. (Newly added) The method of claim 9, wherein said sample fluid is included in a cartridge to be inserted into a reading device.

15. (Newly added) The software program of claim 11, wherein said software program is stored on a data carrier.